

IN THE DESCRIPTION:

Page 9, lines 17-22:

In the embodiments including a reset lockout, the reset portion is used to disable the reset lockout, in addition to closing the open conductive paths. In this configuration, the operation of the reset and reset lockout portions is in conjunction with the operation of the circuit interrupting portion, so that electrical continuity in open conductive paths cannot be reset if the circuit interrupting portion is non-operational, if an open neutral condition exists, ~~and/or if the device is reverse wired.~~

Page 10, lines 1-15:

Turning now to FIG. 1, the GFCI device 10 has a housing 12 consisting of a relatively central body 14 to which a face or cover portion 16 and a rear portion 18 are ~~removably~~ secured. The face portion 16 has entry ports 20 and 21 for receiving normal or polarized prongs of a male plug of the type normally found at the end of a lamp or appliance cord set (not shown), as well as ground-prong-receiving openings 22 to accommodate a three-wire plug. The GFCI device also includes a mounting strap 24 used to fasten the device to a junction box.

A test button 26 extends through opening 28 in the face portion 16 of the housing 12 is a mechanical trip. ~~The test button is used to activate a test operation that tests the operation of the circuit interrupting portion (or circuit interrupter) disposed in the device.~~ The circuit interrupting portion, to be described in more detail below, is used to break electrical continuity in one or more conductive paths between the line and load side of the device. A reset button 30 forming a part of the reset portion extends through opening 32 in the face portion 16 of the housing 12 causes a test and, if okay, then resets the device to be reestablished. ~~The reset button is used to activate a reset operation, which reestablishes electrical continuity in the open conductive paths.~~

Page 12, line 3 – Page 13, line 24:

Referring to Fig. 12, there is shown the detection circuit for the circuit interrupting device of the present invention. The detection circuit detects ground faults when either terminals A or terminals B are connected to a load or a source of electric power. The circuit interrupting device of Fig. 12 is configured such that either differential transformers DT or DT' can operate as transformers that detect leakage current from a load. Also, differential transformers DT and DT' are connected to full wave bridge rectifiers respectively. The RESET button has a reset arm (preferably made from an insulating or an electrically nonconductive material) having four levers (WF, XF, YF and ZF) which are positioned to engage latch wiper arms W, X, Y and Z respectively. The wiper arms are part of a mechanical latch where each wiper arm can take two positions, viz., wiper arm W can be electrically coupled to either contact W1 or W2; wiper arm X can be electrically coupled to either contact X1 or X2; wiper arm Y can be electrically coupled to either contact Y1 or Y2; wiper arm Z can be electrically coupled to either contact Z1 or Z2. In the configuration shown the latch having four wiper arms and two contacts for each arm is commonly referred to as a 4-pole double throw (4PDT) latch. The latch is spring biased to the left (direction shown by arrow D) with SPRING2 and upward (direction shown by arrow C) with SPRING 1. The RESET button being connected to the reset arm is therefore biased upwards as well. The wiper arms W, X, Y and Z are shown in an open position not electrically coupled to their corresponding contacts. When the RESET button is pressed (in the direction shown by arrow C') levers WF, XF, YF and ZF push down on their corresponding wiper arms W, X, Y and Z causing the wiper arms to make electrical connections to contacts W2, X2, Y2 and Z2 respectively. A circuit is therefore created with top rectifier (D3, D4, D5 and D6) and resistor R4 where a current flows through R4 from the positive point of the top rectifier to the negative point of the top rectifier. The current through R4 is detected by differential transformer DT' causing IC-1 to drive Q1 which shorts R1 and C1 to ground thereby activating relay K1 which causes electrically nonconductive reset arm to kick to the right (direction shown by arrow D') breaking the circuit comprising R4 and the top rectifier. SPRING 2 kicks the reset arm back in the direction shown by arrow D with the levers

now positioned below their respective wiper arms because the reset button is still being pressed. When RESET button is released the levers push up the wiper arms (-in the direction shown by arrow C)--due to bias provided by SPRING_1--causing wiper arm W to electrically couple to contact W1, wiper arm X to electrically couple to contact X1, wiper arm Y to electrically couple to contact Y1 and wiper arm Z to electrically couple to contact Z1 thus connecting terminals A and B to the detection circuit. If a load is now connected to terminal B, any leakage current caused by that load will be detected by differential transformer DT and terminal A connected to the line will use bottom rectifier (D3', D4', D5' and D6') to provide power to IC-1 and supporting circuits of the detection circuitry. Alternatively, if a load is connected to terminal A, any leakage current caused by that load will be detected by differential transformer DT' and terminal B connected to the line will use top rectifier (D3, D4, D5 and D6) to provide power to IC-1 and supporting components of the detection circuitry. The receptacle (three hole or two hole female receptacle typically found in household outlets), which is a user accessible terminal, is connected to a load provided by a user and the leakage current from that load will be detected by the differential transformers and energize the relay as explained above. The supporting components comprise diodes D1, D2 and D2', resistors R1, R2, R3 and R3', capacitors C1-C7, C8 and C8' and C9. Q1 can be implemented as a transistor or and SCR (Silicon Controlled Rectifier). Although not shown an MOV (Metal Oxide Varistor) is typically coupled across the line terminals C1 to protect the detection circuit from relatively large energy surges. ~~In the particular detection circuit of the present invention, two MOVs would be used; one across terminals A and one across terminals B.~~

Page 14, lines 12-20:

~~In the embodiment shown in Fig. 2 and 3, the reset lockout portion includes latching fingers 102 which after the device is tripped, engages side L of the movable arms 50,70 so as to block the movable arms 50,70 from moving. By blocking movement of the movable arms 50,70, contacts 52 and 56, contacts 62 and 66, contacts 72 and 76 and contacts 82 and 86 are prevented from touching. Alternatively, only one of the movable~~

~~arms 50 or 70 may be blocked so that their respective contacts are prevented from touching. Further, in this embodiment, latching fingers 102 act as an active inhibitor that prevents the contacts from touching. Alternatively, the~~ The natural bias of movable arms 50 and 70 ~~can be~~ is used as a passive inhibitor that prevents the contacts from touching.

Page 15, lines 7-13:

After tripping, the coil assembly 90 is de-energized so that spring 93 returns plunger 92 to its original extended position and banger 94 moves to its original position releasing latch member 100. At this time, the latch member 100 is in a lockout position where latch finger 102 inhibits movable contact 52 from engaging fixed contact 56, as seen in Fig. 10. ~~As noted, one or both latching fingers 102 can act as an active inhibitor that prevents the contacts from touching. Alternatively, the~~ The natural bias of movable arms 50 and 70 can be used as a passive inhibitor that prevents the contacts from touching.